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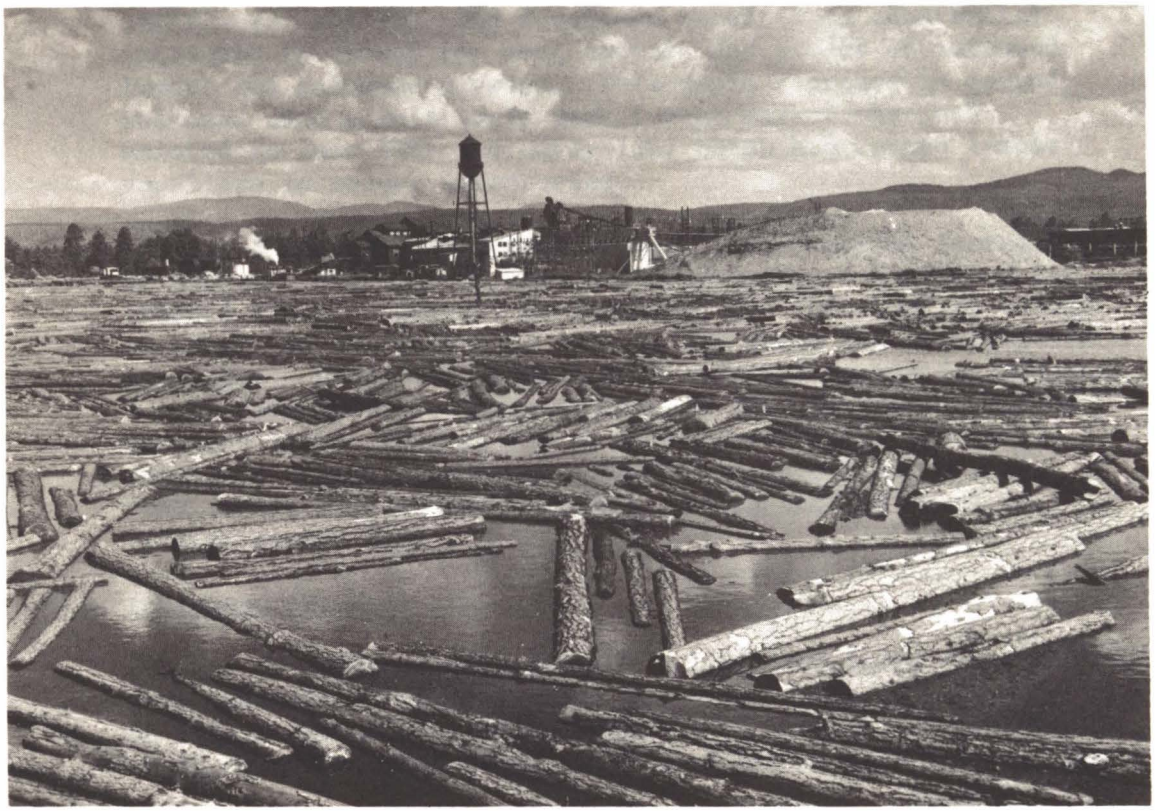
REPORT

LUMBER & PLYWOOD SUPPLY



A SITUATION REPORT

FOREST SERVICE ● U.S. DEPARTMENT OF AGRICULTURE ● MARCH 1969

SOFTWOOD LUMBER AND PLYWOOD SITUATION

During the past year prices of softwood lumber and plywood have risen sharply to record high levels. These price rises can be attributed to a number of factors, each contributing in varying impact to the overall price situation.

(1) Increased domestic demand:

A sharp rise in residential construction and in output of containers, pallets, and furniture resulted in substantial increases in demand for most species and grades of softwood lumber and softwood plywood. This rapid increase in demand followed upon a relatively weak lumber market that had existed in late 1966 and early 1967 which had caused lumber suppliers to reduce inventories.

The rapid increase in demand brought a substantial increase in output. Supplies of both softwood lumber and plywood increased about 10 percent during 1968, but this was not enough to match the sharp rise in demands for these key construction materials. Domestic production of softwood lumber in 1968 was 2.4 billion board feet higher than in 1967, while imports of softwood lumber rose by 700 million board feet. The total available supply of softwood lumber was 35.3 billion board feet, while supplies of softwood plywood totaled about 14 billion square feet.

(2) Increased exports:

Exports of softwood logs reached 2.5 billion board feet in 1968--approximately 30 percent above 1967, and about 12 times the level of 1960. These log exports represented nearly 7 percent of the total domestic production of softwood saw logs and veneer logs.

Exports of softwood lumber from the United States in 1968 amounted to about 1.1 billion board feet--about 10 percent above 1967, and 60 percent higher than in 1963.

It is estimated that about two-thirds of the unprocessed logs exported in 1968 came from unrestricted private or non-Federal sources. Log exports of most logs from Federal lands are restricted.

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(3) Production difficulties:

Production problems have had a limiting effect on lumber supplies. Adequate labor has not been readily available to increase production of logs or processed products. A boxcar shortage in the Northwest has caused transportation difficulties. There has also been a rise in production costs due to increases in wages and freight rates. And since early January the adverse weather conditions in the Northwest have severely slowed the rate at which logs can be supplied to the mills.

(4) Supply expectations:

The expected major increase in housing construction and continuing expansion of other markets for wood products in future years, in the face of potential timber shortages, undoubtedly has also contributed to a buildup of inventories and rising prices. This tendency to build up inventories in expectation of a tight supply will continue to accentuate the supply and price situation.

SOURCES OF SOFTWOOD LUMBER AND PLYWOOD LOGS

At the present time softwood lumber markets in the United States are being supplied mainly by harvesting of old growth forests in the West, by harvesting young growth timber in the South and the North, and by drawing upon imports from Canada. Western forests are of major importance to the supply situation, having provided 64 percent of total sawtimber supplies in 1968.

Region	Billion Bd. Feet	Percentage
West	27.6	64.4
South	8.6	20.0
North	1.2	2.7
Canada	5.5	12.9
Total	42.9	100

Of the total 510 million acres of commercial forest land in the United States, 72 percent is in private ownership. This includes land-holdings of forest industries, farm holdings, and miscellaneous private ownerships.

National Forests account for 19 percent of commercial forest lands, and other Federal, State, and local holdings make up 9 percent.

Type of Ownership	Percent of Area	Percent of Softwood Sawtimber Inventory	Percent of Softwood Sawtimber Removals
National Forests	19	54	30
Other Public	9	11	9
Forest Industry	13	17	33
Farm & Misc.	59	18	28

Private landholdings have provided an estimated 61 percent of the recent harvests of softwood sawtimber, and these lands now hold 35 percent of total available inventory. On the highly productive private lands in the West, however, timber resources are being overcut and log supplies from these lands must decline further in the relatively near future.

Somewhat more than half of total inventories of softwood sawtimber is located on National Forests, chiefly in the West. These forests supplied the logs for an estimated 30 percent of total harvest of softwood sawtimber or about 40 percent of the total production of the West.

National Forest Lands

Under the Multiple Use Act of June 12, 1960, the National Forests are to be managed not only for sustained production of timber, but also for other public benefits such as outdoor recreation, protection of streamflows, livestock grazing, maintenance of fish and wildlife resources, and production of minerals. These basic multiple use requirements preclude rapid liquidation of old-growth timber in disregard of other National Forest purposes.

Of the 183.5 million acres in the National Forests, some 97 million acres are classed as commercial forest, i.e., both suitable and available for production of continuous crops of timber under multiple use management. About 14.3 million acres, including considerable productive forest land as well as alpine areas, are included in National Forest Wilderness and Primitive Areas under a program which the Forest Service pioneered in 1924. It is the objective of the Forest Service to maintain an enduring system of high quality wilderness. The Forest Service endorses the idea that the wilderness system includes lands which would otherwise be suitable for other purposes, including timber production. In addition it is recognized that timber harvests will be restricted in other areas where protected timber stands are needed to protect watersheds, scenic beauty, fish and wildlife habitat, and to provide forage and outdoor recreation opportunities. Other National Forest land suitable primarily for other non-timber purposes totals about 72 million acres.

In managing timber resources, the National Forests are organized into units termed "working circles," each with its own "allowable cut." Over the years the average annual allowable cut on the National Forests has been increased as follows:

Fiscal Year	Annual Allowable Cut of Sawtimber (Billion bd. ft. log scale)
1950	5.6
1955	7.2
1960	9.2
1965	11.1
1968	11.3
1969	11.4

These increases in amounts of timber available for harvest are a result of a number of factors such as construction of access roads, improved inventory data, better utilization of the whole tree, more effective protection of forests from fire, insects and disease, and increased reforestation and timber stand improvement programs. The degree to which such improvements and practices can be applied are directly related to the amount of funds available for such work.

SUPPLY OUTLOOK

For the present there are sufficient supplies of standing softwood sawtimber to meet immediate needs. However, the price situation that has now developed is, in part, a result of a tightening timber supply situation and a possible forerunner of continued supply and price problems.

Prospective supplies utilizing only current sources will not be adequate to meet all projected demands for wood products in the future. The supply situation of softwood sawtimber and plywood must be looked upon in two different time periods--the immediate future, up to 3 years, and the long-range future. Following are factors that can have an effect on supplies.

IMMEDIATE FUTURE

National Forest Lands

Part of the short-run problem of timber supply depends upon the rate at which the forest industries cut available timber. As of July 1, 1968, some 37.5 billion board feet of standing timber on the National Forests was under sales contracts with timber purchasers. This included 26.6 billion board feet of uncut sawtimber in the contiguous States--well over twice the total annual level of cutting on these National Forest lands. Most of this timber was placed under contract before the recent sharp rise

in prices of lumber and plywood. Purchasers of this National Forest timber face production difficulties similar to operators of private timber. An increase in the rate of harvest of this timber already under contract is expected in response to high levels of lumber and plywood prices.

To help alleviate the bidding pressure which has resulted in exceptionally high bids in competitive sales, the Forest Service is planning to increase timber supplies through short-run increases in timber sales. A large portion of this increase is in the form of salvage and thinnings. Such increases cannot be characterized as "increases in the allowable cut." They are increases in sales to contribute to maintaining and increasing the backlog of standing timber under contract. Because of the time lag between sale, processing and delivery, much of this timber will not appear in product markets for several years.

The Forest Service is under strong pressure to make further increases in allowable cuts and is anxious to do so, but in coordination with other forest purposes. Allowable cuts will be increased as rapidly as justified by actual accomplishments in necessary forest management work and additional road construction. However, because of the usual time lag between sale of timber and the time the timber is logged and processed, it is unlikely that this could result in a significant, prompt increase in production of lumber and plywood.

Other Forest Lands

In the short run, some increases in timber harvest on private lands and on other public holdings can be expected as a result of the high price levels and expanding markets for softwood lumber and plywood. Some increases in timber cutting in the South, for example, may be based upon the present excess of growth over removals. Other short-run increases in output in areas such as the Pacific Northwest may occur as a result of high price levels, even though this would further accelerate liquidation of private timber inventories.

Exports

Exports of softwood lumber from the United States in 1968 amounted to about 1.1 billion board feet--about 10 percent above 1967 and 60 percent higher than in 1963. Imports of softwood lumber in 1968 rose about 10 percent to 5.5 billion board feet. The sizable excess of lumber imports over exports of logs and lumber is an important element in the U.S. timber supply situation.

By the administrative order last April, the Secretary of Agriculture and Secretary of the Interior established regulations requiring domestic primary manufacture of all but 350 million board feet of timber sold annually from the Federal lands in Western Oregon and Western Washington. The Foreign Assistance Act of 1968 extended the export limitation to all Federal lands west of the 100th Meridian through 1971.

In both instances the restrictions apply only to Federal timber sales made since the effective date of the actions: April 1, 1968 for the administrative action, and January 1, 1969 for the amendment to the Foreign Assistance Act. It's the consensus that effects from the new controls have not yet been felt because of the lag between time of sale and actual timber harvest.

Exports from Federal lands will be reduced gradually as the result of the Foreign Assistance Act of 1968 amendment and the previous administrative action. However, only about one-third of the softwood logs for the export market are derived from Federal Lands. The other two-thirds from private and non-Federal public lands are not subject to any control.

LONG RANGE FUTURE

National Forests and Other Federal Lands

There are significant opportunities for increasing supplies of timber from the National Forests and from other Federal lands within multiple use guidelines. This will require that efforts be expanded to obtain accelerated growth of timber and to improve utilization of available supplies in order to meet expanding demands for lumber, plywood, pulp and paper, and other wood products. To achieve this goal, it is critically important that management efforts to improve the future timber supply situation be substantial and undertaken promptly. Such intensified forestry programs would require additional funds. These programs would include:

--Early construction of an adequate system of forest roads.

--Expansion of reforestation of current cutovers and other non-stocked or poorly stocked land, using genetically superior planting stock as rapidly as available.

--Increased commercial thinnings to free desirable species from competition and to utilize timber otherwise lost to mortality.

--Increased non-commercial thinnings to release young trees in stagnated stands and to remove undesirable species.

--Increased salvage of timber killed by fire, insects, or other destructive agents.

--Closer utilization of the timber harvested to use residuals now considered too small or too defective for commercial use.

--Application of fertilizers as applicability is proven for various sites and forest types.

Forest Industry Lands

The holdings of forest industries in the aggregate account for 13 percent of the Nation's commercial forest land. Many of these industrial forests are now under relatively good management and substantial investments are now being made in timber-growing programs. Production on these lands could be increased further by more intensive management .

Farm and Miscellaneous Private Lands

The forest properties of farm and miscellaneous private owners--which include 59 percent of the Nation's commercial forest land--have a major potential for producing increased supplies of both softwood and hardwood timber, However, current management of these lands is limited and average growth per acre is considerably below attainable levels. There are more than 3 million of these ownerships. Much of the timber available from these lands is of small size--suitable for the pulp and paper industry but not for efficient production of lumber and plywood.

Increasing production of sawtimber on these lands will require very sizable investments of capital in such measures as timber stand improvement and thinning and planting, as well as protection and improved harvesting practices.

It is clear that public assistance will be essential if these lands are to provide an increasing flow of softwood timber for the lumber and plywood industries, including:

--Public cost-sharing through the Agricultural Conservation Program is one means that has been used to help meet the need for investment capital. At present about 21,000 owners annually are planting trees and about 10,000 owners are improving their timber stands through this program. A greatly expanded cost-sharing effort will be needed if the long-run timber supply problem on these non-industrial private lands is to be solved.

--Technical assistance in managing forest properties and in harvesting and selling timber will also be needed by most landowners. Cooperative Federal-State programs and some industry groups are now providing assistance to about 100,000 forest owners annually--a small portion of the total owners in need of assistance.

--Technical assistance in logging and processing operations also could add to the available supply of usable timber. Much waste now occurs in felling and bucking timber, in the manufacture of lumber, and in the seasoning of forest products. Some 75 State and Federal specialists are now providing assistance to loggers and sawmill operators under cooperative programs, but only a very small proportion of wood-using operations is being reached.

--Assistance in organizing crews of forest workers to carry out forestry work, such as planting and stand improvement under contracts with private owners.

--Recruitment and training of workers for the forest industries, conducted jointly by industry and Government, and aimed at increasing the quantity and quality of the labor force.

--Establishment of forest development associations to consolidate fragmentary ownerships for intensified forest management and improved harvesting.

--A nationwide system of reports on timber prices and other market information to aid non-industrial forest owners in marketing timber and to stimulate increased interest in forestry.

Development of New Technology

The timber supply situation could be further improved in time by discovering new or improved ways to increase timber growth and improve timber utilization. Such efforts should include:

--Development of better techniques for thinning stands, improving stand composition, and managing forest land following harvest of mature trees in order to accelerate timber yields. Research on tree breeding and seed selection from superior trees also can lead to substantial increases in future growth of plantations and reduced losses to insects and diseases.

--Development of improved technology in the area of forest protection to reduce losses of timber from destructive agents. Research on fire prevention, detection, and suppression promises large

savings in both fire-fighting costs and in timber losses. Improved methods of forest management can significantly reduce losses in timber quantity and value from tree diseases and forest insects.

--Development of practical applications of forest fertilizers, based upon research on tree nutrition, factors of moisture supply, soil characteristics and cultivation procedures.

--Improvement in techniques for using wood in construction, including improved design criteria, use of non-destructive testing methods, and other information on wood properties to make possible better structural uses of wood.

--Development of ways of using material now wasted, including research in pulping and paper production to broaden the raw material base and to reduce processing wastes.

--Improvement of logging equipment and systems, including equipment for operating small holdings, and mechanization of fire control, tree planting, and other forestry operations. This will require both engineering research, and the development and testing of equipment and systems. Effective methods of balloon or skyline logging, for example, would make possible increased harvests of timber in steep mountainous country, with fewer roads and reduced impacts on water and recreation values.

--Determination of ways to stimulate the millions of non-industrial forest owners to make the investments required to grow larger crops of timber.

--Comprehensive and continuing appraisals of timber resources to evaluate the changing timber situation, to aid the development of forest industries, and to provide guidelines for forestry programs.

Many of the programs outlined above, both for the National Forests and for other classes of forest ownership, will require joint efforts of Government, forest industries, and private landowners. A substantial intensification of current forestry programs also will be necessary to achieve needed improvements in the future timber supply situation.

QUESTIONS AND ANSWERS

QUESTION: Is the reason for high prices of lumber a shortage of timber?

ANSWER: Not entirely. At the moment, more timber is available in the woods, but logging and manufacturing haven't been able to catch up with demand. The result has been increased lumber and plywood prices because production has not caught up with demand.

Supplies of both softwood lumber and plywood increased about 10 percent during 1968, but this was not enough to match the sharp rise in demand for materials for residential construction and other wood products. Also affecting the supply were rising exports of logs and lumber, limitations on production in woods and mills because of adverse weather and labor shortages and increased buying of timber based on the expectation of continued expansion of demand in the years ahead.

Forest Service economists have reported an actual shortage will occur within the next 15 years if efforts don't begin immediately to increase production. With present forestry efforts, the deficit in available supplies under expected demand could amount to 10 billion board feet annually.

QUESTION: What part of the Nation's timber production goes to the homebuilding industry?

ANSWER: Only about 40 percent of the softwood and plywood consumed in the United States is used for housing construction. The remainder goes for non-residential construction, shipping, pulp, and other purposes.

QUESTION: What percentage of total available commercial forest land does the Forest Service manage?

ANSWER: Of the estimated 510 million acres of commercial forest land in the United States, the National Forests have 19 percent. This amounts to 97 million acres suitable and available for production of continuous crops of timber. Private ownerships of commercial forest land total 72 percent. Other public lands of this type total 9 percent.

QUESTION: How much timber is harvested from National Forest lands each year?

ANSWER: The National Forests supply about 30 percent of the current harvest of softwood sawtimber. The harvest of sawtimber from National Forests in fiscal year 1968 was 11.2 billion board feet. Other Federal, State and local public holdings provide about 9 percent, private forest industry lands 33 percent, farm and miscellaneous land 28 percent. Private ownerships are the principal suppliers, providing an estimated 61 percent of softwood sawtimber.

QUESTION: Are high prices paid for National Forest timber causing the high lumber and plywood prices?

ANSWER: Bid prices for National Forest timber are responses to end-product prices, not the cause of them. Bidding has intensified lately in response to the sharp increases in lumber and plywood prices. Timber purchasers normally start harvesting sales areas six to 18 months after they buy, depending on the size of their backlog of timber and the general accessibility of a given sale. The purchaser pays as he removes the timber; thus the stumpage prices being paid at this time are in many cases prices that were bid before the sharp upsurge in lumber prices began.

QUESTION: What increases has the Forest Service made in allowable cuts nationally in recent years?

ANSWER: In 1950, the annual allowable cut of sawtimber was 5.6 billion board feet. Ten years later in 1960, it had been raised to 9.2 billion. This year, it has been set at 11.4 billion. These increases reflected a number of factors--construction of access roads, improved inventory data, changes in utilization standards, more effective protection of forests from fire, insects and disease and increased reforestation and timber stand improvement.

QUESTION: Would an immediate substantial increase in the allowable cut (total amount of timber which can be harvested in a single year) from National Forests alleviate the high price situation?

ANSWER: It might ease the situation but it would still leave the other problems of tight supply unresolved. With the production problems it already faces, industry might not be able to gear up fast enough to raise the supplies of lumber and plywood to a point where they would match or exceed demand in the near future, thereby stabilizing prices.

There is usually a considerable time lag between the sale of timber and the time it is logged and processed. Consequently, even if a sudden increase in allowable cut were possible, it is unlikely that this could result in significant, prompt increase in production of lumber and plywood.

QUESTION: Are timber buyers cutting and processing timber as quickly as it is put on the market?

ANSWER: As of July 1, 1968, softwood sawtimber already sold--but still uncut in National Forests (not counting Alaska)--totalled almost 27 billion board feet. This is more than twice the annual level of cutting. This doesn't reflect an unusual proportion; we try to keep two years allowable cut under contract. It does show that a substantial increase in cut is possible depending on the speed with which purchasers cut the timber they have already bought. It's likely that an increase in rate of cut of 10 to 15 percent could be made by purchasers using the volume currently under contract.

QUESTION: Why does the Forest Service object to arbitrarily increasing the allowable cut?

ANSWER: The law requires it to manage forest resources on a sustained yield basis. This must be done in coordination with other National Forest purposes--outdoor recreation, protection of streamflows, livestock grazing, maintenance of fish and wildlife resources and production of minerals. The Forest Service has managed to continue increases in allowable cut but only as intensified forestry work and access road construction is accomplished. Arbitrary increases are contrary to sound concepts of conservation and wise use of the forests.

QUESTION: Can more be done to increase allowable cuts?

ANSWER: Some things can be done, and we are anxious to increase allowable cut as quickly as we have earned the right to do so by accomplishing the intensified forestry and road development work needed to support higher yields of timber on a sustained basis.

In the meantime, the Forest Service sees the following possibilities for increasing timber harvests from National Forests within the next 1½ years:

1. An increase in the sales of thinnings and salvage timber.

2. An increase in timber sales in parts of the National Forests where demand for timber has been low.

3. An increase in the rate of harvest of timber already under contract, as the result of the current high lumber and plywood prices.

QUESTION: Is it true that Chief Cliff reported that the allowable cut could be increased by two-thirds, without endangering conservation methods?

ANSWER: Speaking before a Senate Subcommittee in November 1968, Chief Cliff said studies show "that allowable cuts could--in time--be increased about two-thirds by intensifying timber culture on the more productive portions of National Forest commercial timberlands." He said substantial investments would be required to accomplish this, but the returns in terms of increased wood supplies and other benefits of forest management would more than offset the costs.

QUESTION: What is the objection by the Forest Service to lowering the rotation ages (growing time) of timber for harvest?

ANSWER: This would work to deplete our present supplies of old-growth sawtimber for the present, but at the expense of the future. It would lead to a significant falloff of both size and quality of timber as the old-growth is liquidated. And it would cause a dip in the level of future allowable cuts as the older and larger timber disappeared.

The faster the liquidation, the greater the degree of falloff in the future. This falloff would extend into the next rotation reducing the timber supply at a time when more timber, rather than less, will be needed.

QUESTION: Have the log exports affected current supplies of timber for use in the domestic lumber market?

ANSWER: They have contributed to the tight supply. Exports to Japan and other countries reached 2.5 billion board feet in 1968--approximately 30 percent above 1967 and about 12 times the level of 1960. These log exports represented nearly 7 percent of the total domestic production of softwood saw logs and veneer logs.

QUESTION: Why hasn't the effect of the amendment to the Foreign Aid Act, setting a limitation on logs sold from Federal lands for export, been felt in increasing the timber supply?

ANSWER: It's the consensus that effects from the new controls have not yet been felt because of the lag between time of sale and actual timber harvest. Volume sold prior to the Act and previous administrative controls implemented by the Secretaries of Agriculture and the Interior are exempt. Exports from Federal lands will be reduced gradually as a result of the administrative actions and the Foreign Assistance Act of 1968. However, only about one-third of the softwood logs for the export market are derived from Federal lands. The other two-thirds from private and non-Federal public lands are not subject to any direct control.

QUESTION: What does the Forest Service suggest for matching supply with the rapidly increasing demand it has prophesied for the rest of the century?

ANSWER: 1. Forestry programs on National Forests and other Federal lands can be increased significantly. These programs would include building more forest roads, increasing reforestation with genetically superior planting stock as available, thinning more young stands to increase growth rates, increased salvage of fire, insect and disease-killed timber, improving utilization of what is now treated as waste in timber harvesting and use of fertilizers on sites and forest types where the effectiveness of applicability is proven.

2. Increased production of other lands suitable for commercial timber growing, particularly farm and miscellaneous ownerships which make up 59 percent of the Nation's commercial forest land. This calls for sizable investments of capital, of which most owners of small holdings have little. Public assistance will be essential to provide cost-sharing programs and massive technical assistance to put the lands into production.

3. Continued development of new technology through research to increase timber growth and improve timber utilization.

QUESTION: What can be done on National Forest and other Federal lands to meet long-term timber needs?

ANSWER: Timber harvests can be increased through intensified forestry programs including:

--Early construction of an adequate system of forest roads.

--Reforestation of current cutovers and other nonstocked or poorly stocked land, using genetically superior planting stock as rapidly as possible.

--Commercial thinnings to free desirable species from competition and to utilize timber otherwise lost to mortality.

--Noncommercial thinnings to release young trees in stagnated stands and to remove undesirable species.

--Increased salvage of timber killed by fire, insects, or other destructive agents.

--Closer utilization of the timber harvested to use residuals now considered too small or too defective for commercial use.

--Application of fertilizers as applicability is proven for various sites and forest types.

The timber supply situation can be further improved in time on all forest lands by increased forestry research to determine ways to increase timber growth, improve timber utilization, and improve overall management activities.

QUESTION: What can be done on other lands (besides Federal) to meet long-term timber needs?

ANSWER: The forest properties of farm and miscellaneous private owners--which include 59 percent of the Nation's commercial forest land--have a major potential for producing increased supplies of both softwood and hardwood timber. However, current management of these lands is limited and average growth per acre is considerably below attainable levels. There are more than 3 million of these ownerships. Much of the timber available from these lands is of small size--suitable for the pulp and paper industry but not for efficient production of lumber and plywood.

Increasing production of sawtimber on these lands will require sizable investments of capital in such measures as timber stand improvement and thinning and planting, as well as protection and improved harvesting practices.

It is clear that public assistance will be essential if these farm and miscellaneous lands are to provide an increasing flow of softwood timber for the lumber and plywood industries, including: A greatly expanded cost-sharing effort; increased technical assistance in managing forest properties and in harvesting and selling timber; and increased technical assistance in logging and processing operations.

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